Update to the USMC Log Board on Total Life Cycle Management IPT Progress

Mr. Gale Heaivili
Mr. Greg Sieber
23 September 2008

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0900	**TLCM Project Background**	**Mr. Heaivilin**
0915	**TLCM Process**	**Mr. Sieber**
0930	**BREAK**	
1000	**IPT Results** ·**Overview** ·**Enterprise Level Maintenance Planning** ·**Proposed Solutions** ·**Improvement Examples**	**Mr. Sieber / IPT Leads**
1045	**Roles and Responsibilities**	**Mr. Heaivilin**
1100	**Way Ahead Discussion**	**MajGen Usher**

Background

- **DC I&L Priorities 2 and 3:**

  - **Increase equipment readiness through "cradle-to-grave" management of weapons systems**

  - **Improve combat readiness through innovation**

- **"…address in a comprehensive way the roles, responsibilities and policies for the TLCM Value Stream in order to optimize the effectiveness of the support it delivers to our Warfighters…"**

DC I&L Letter 22 Jan 2008

The Marine Corps is less capable delivering and measuring combat readiness performance at all levels of the enterprise because:

- TLCM is not well synchronized across multiple organizations, and with the Expeditionary Force Development System (EFDS) and the Planning, Programming, Budgeting and Execution System (PPBES)

- TLCM roles, responsibilities, relationships are not clear

- Reliable fact-based information for making decisions is lacking or not well synchronized across multiple organizations and with EFDS and PPBES

- Limited collaboration exists among stakeholders & their organizations

- Internal controls are absent/do not effectively support TLCM phases

- Full cost, standard process, standards outputs, and performance metrics are lacking

NO ONE IS IN CHARGE !

Marine Corps Logistics Board -- September 23, 2008

Executive Steering Group Oversight

I&L - ADC	**M&RA**
I&L - LPC / LPV	**P&R**
I&L - LSX / CNA	**AVN**
I&L - LR MCBEO	**MARFORCOM**
MARCORLOGCOM	**MARFORPAC**
MARCORSYSCOM	**MARFORRES**
PEO LS	**INTEL**
CD&I / MCCDC	**C4**
PP&O	**CL**

MILESTONE STATUS	DATE	STATUS
Charter Signing	2-May	Complete
IPT Workshop 1 **Initial 5-day TLCM Value Stream Orientation/Mapping**	5 - 9 May	Complete
ESG Meeting 1 **Review IPT Deliverables**	15 May	Complete
IPT Workshop 2 **Continue TLCM Value Stream Mapping**	28 - 30 May	Complete
ESG Meeting 2 **Review 1ST Draft "As-Is" Maps**	12 Jun	Complete
IPT Workshop 3 **First Draft "To-Be" Maps**	24 - 26 Jun	Complete
IPT Workshop 4 **Review To-Be Process Maps and Roles, Responsibilities for MCO**	22-25 Jul	Complete
ESG Meeting 3 **Review To-Be Process and Roles, Responsibilities & Relationships**	15-Aug	Complete
Senior Mentor Review	8-Sep	Complete
IPT Workshop 5 **Leadership and Management Model, MCO Content**	9-12 Sep	Complete
ESG Meeting 4 **Executive Brief on MCO and Roles, Responsibilities & Relationships**	16 Sep	Complete
Brief LOG BOARD	23 Sep	In Process
IPT Workshop 6 **POA&M for Way Ahead, Final Deliverables Review**	30 Sep – 2 Oct	On Schedule
MCO Out for Formal Staffing / DC Comment	3 Nov	
MROC Brief	Nov-Dec 08	
MCO Signed	Jan 09	
Begin POA&M Implementation Phase	Jan 09	

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TLCM Process

Mission – **12** Goals – **68** CTQs → Process Review → **> 350** Issues and Ideas → Merge and Review Initiatives, align with phases → **48** Grouped Problems → **105** Improvement Concepts

Root Cause Analysis

Mission, Goals, and Critical-to-Quality drivers come together with improvement initiatives for a complete picture of TLCM for the MCO

11 Major Improvement Initiatives

Marine Corps Order

To-Be Process Maps

Strategic Plan

POA&M
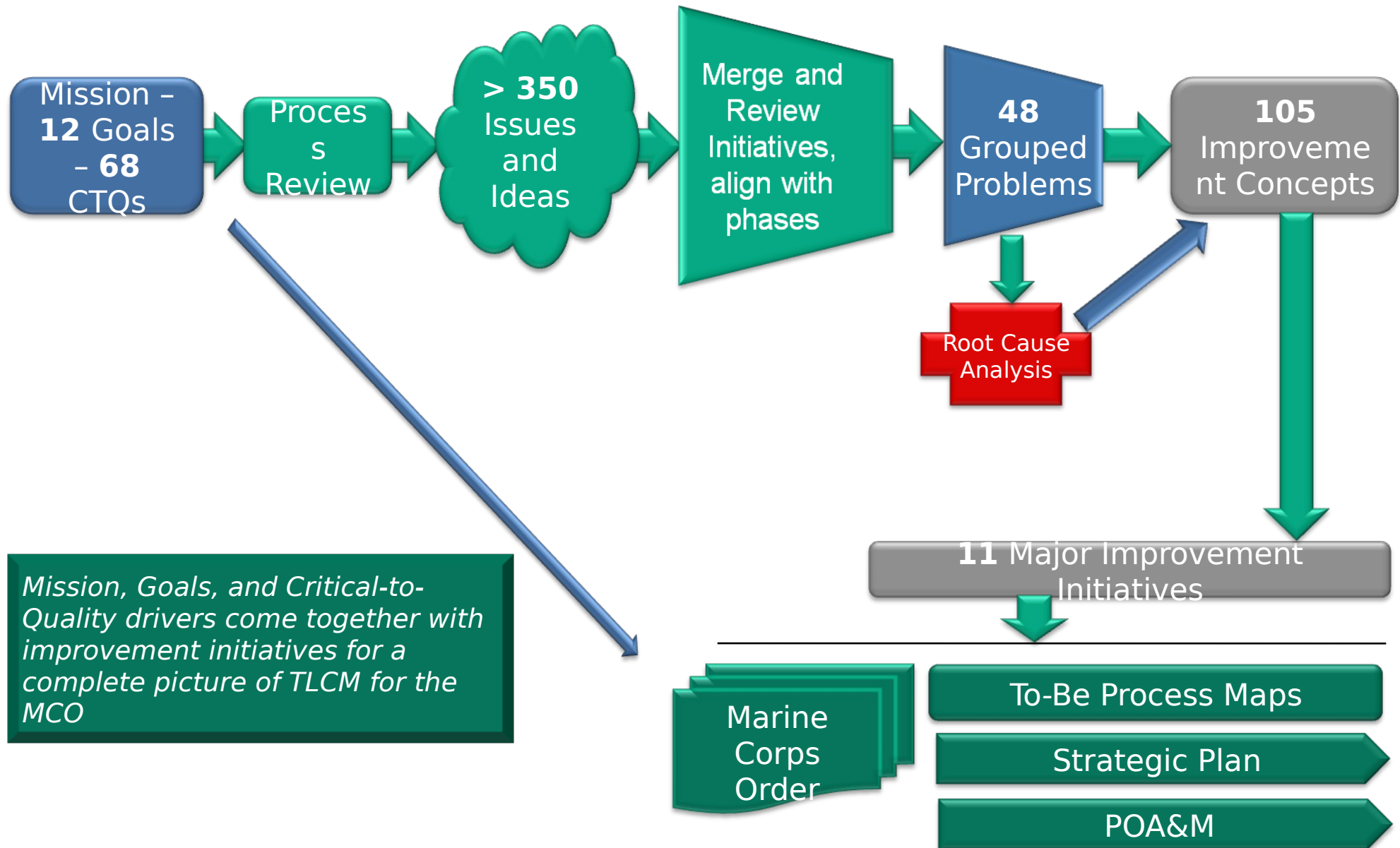
IPT Results

IPT Deliverables

	DELIVERABLE	STATUS
PRIMARY	As-Is Value Stream Maps (tiered)	Complete
	To-Be Value Stream Maps (tiered)	Final edits complete
	Roles, Responsibilities, Relationships	Final edits complete
	MCO	First draft being edited, final by 30 Sep
	IM Definition	Initial draft of maps and tables complete
	MROC Briefing	Preparing
SECONDARY	Assessment of the TLCM Value Stream	Complete
	Risk Assessment	Complete
	Issues List & CPI Opportunities Statements	Complete
	Way Ahead POA&M	30 Sep - 2 Oct
FOLLOW O	TLCM Policy Manual	TBD
	Broader analysis and move forward with CPI	FY09

- **TLCM is knowledge/human centric process**
- **TLCM is complex environment with variation**
- **TLCM governance is crucial**
- **Information is center of gravity**
- **TLCM funding process hinders sustainment**
- **Sustainment planning must be robust**
- **Collaboration is critical to success**

UNITED STATES MARINE CORPS
TOTAL LIFECYCLE MANAGEMENT (TLCM) PROCESS

TOTAL LIFECYCLE MANAGEMENT, GROUND MATERIEL

TLCM - LEVEL 0

TLCM PROCESS MAPS MASTER.vsd
Edited: 6 September, 2008

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Integrating
# Enterprise Level Maintenance Planning
(ELMP)
into TLCM

- **Overall objective: ELMP is fixing Depot Maintenance Planning**
  - Forms the basis for input into the DoD Planning, Programming, Budgeting and Execution system for USMC Depot Level Maintenance Program (DLMP)
  - Improves the reliability and accuracy of USMC depot maintenance planning
  - Optimizes the budget so that limited funding is going to the most critical "readiness-items"
  - Reduces total repair cycle time, with a direct impact on *greater availability and readiness*
  - Increases efficiency and avoids costs associated with un-needed maintenance

- **ELMP has demonstrated clear and quantifiable improvement potential:**
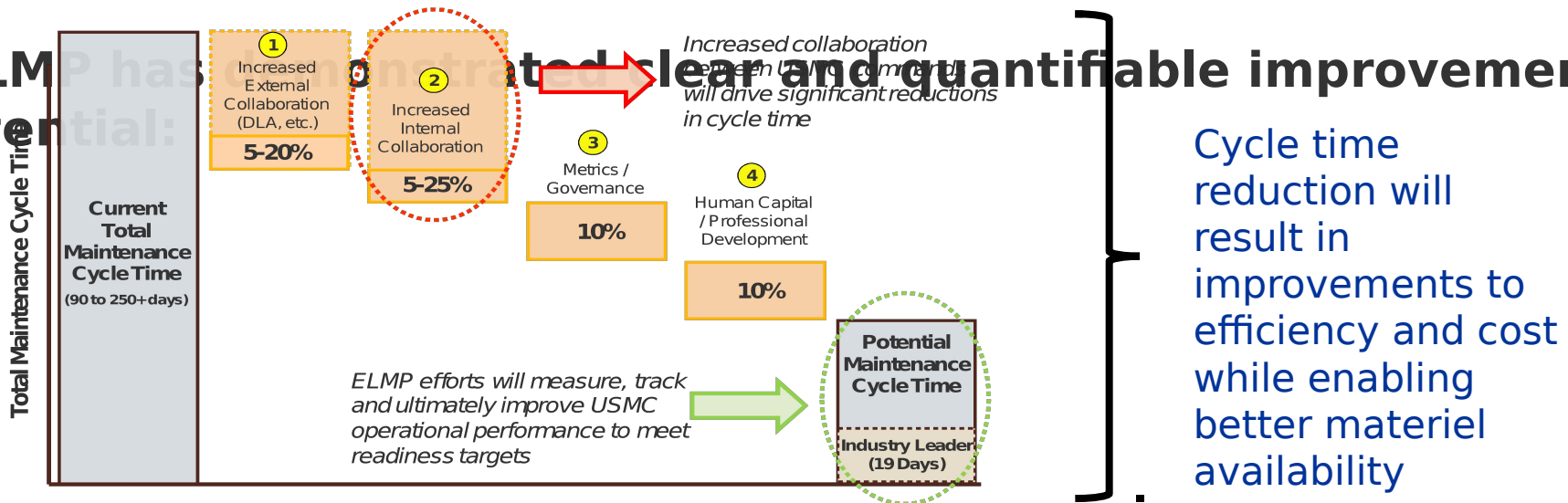
- **Conducted a "Depot Maintenance" assessment the   end-to-end USMC**

- **The USMC Depot Maintenance Planning Process must experience a 'midlife overhaul'**

- **<u>Designed</u> and <u>piloted</u> a process focused on a more collaborative approach to planning**

- **Learned that the most critical issues exist at the handoff points between Commands**

- **Major actions are required of USMC Stakeholder**

- **Target metrics will be incorporated into the ELMP governance structure**

ELMP Expansion and Rollout	Extension to Broader Planning Scenarios	Unit-Level, Capability-based Planning
• Identify, plan, and conduct the next wave of ELMP Pilots	• Extension of the Planning Process into the operational field units	• Expansion of the Lifecycle Maintenance Planning process and Price and Performance Models and tools to support Unit-Level Capability Based planning
• Rollout process across all Programs with governance and performance tracking	• Extension of the ELMP process to conduct Depot Requirements planning in support of RESET / REFURB operations	
• Educate the Enterprise on the ELMP process		
• Implement recommendations for Price and Performance Model		

Resolution of these actions will not be instantaneous; it will require:
- **Active support from USMC leadership**
- **Alignment of all involved USMC stakeholders**

…and it will take time

Proposed Solutions for Improvement

- **Assign roles, responsibilities, relationships**
- **Publish Appropriate Policy**
- **Improve workforce capability**
- **Institutionalize quality management/measurement**
- **Improve the TLCM process**
- **Improve Depot Maintenance process (e.g., ELMP)**
- **Enable the process with technology**
- **Improve TLCM tools**
- **Improve TLCM communications**
- **Improve TLCM data and info management**

- **Assign roles, responsibilities, relationships**
  - Establish TLCM decision board
  - Implement strategic planning & goal deployment process
  - Create tiered, TLCM cross-functional teams
  - Establish TLCM management office

- **Publish appropriate policy**
  - Publish TLCM MCO
  - Improve funding policies
  - De-conflict existing policies

- **Improve workforce capability**
  - Create workforce excellence program (e.g., cross training)
  - Place TLCM performance metrics into leadership objectives
  - Establish TLCM mentoring program
  - Conduct annual TLCM refresher training

- **Institutionalize quality management**
  - Establish metrics and measurement system
  - Establish accountability for metrics
  - Deploy customer satisfaction program
  - Deploy Continuous Process Improvement (CPI)

- **Improve the TLCM process**
  - Design and implement feedback process
  - Improve requirements determination (e.g., UUNS)
  - Integrate sustainment requirements into front end
  - Ensure comprehensive/enforceable tasking process
  - Define, institutionalize, automate Program Management triggers
  - Design/implement portfolio management processes
  - Refine and enforce comprehensive systems engineering approach

- **Improve/integrate Depot Maintenance process (e.g., ELMP)**

- **Enable the process with technology**
  - Create modeling and simulation capability
  - Create data repository portal
  - Develop end-to-end TLCM Information Technology, Information Management, Knowledge Management (IT / IM / KM) requirements
  - Implement project management technology
  - Implement process automation system

- **Improve TLCM tools**
  - Standardized checklists and templates
  - Create TLCM playbook / reference guide

- **Improve TLCM communications**
  - Formalize feedback processes
  - Develop handbooks and playbooks for participants
  - Implement TLCM Communications Plan

- **Improve TLCM data and info management**
  - Institutionalize TLCM enterprise architecture
  - Create TLCM compliance team
  - Cross train / assign people within TLCM roles

TLCM Roles and Responsibilities

I&L Roles and Responsibilities

- Serve as the TLCM Value Stream steward
- Lead TLCM strategic planning and goal deployment
- Develop integrated TLCM Enterprise Architecture that:
  - **Provides TLCM IT / IM / KM services**
  - **Provides enterprise-wide asset management capabilities**
  - **Provides visibility of full life cycle costs**
  - **Provides TLCM performance measurement capability**
- Develop TLCM policy and resource requirements (dollars and manpower)
- Integrate the TLCM processes
- Lead TLCM Workforce development
- Provide TLCM administrative support
- Provide Continuous Process Improvement leadership
- Provide Integrated Logistic Support assessments

Establish I&L role as the G-4 of the Marine Corps

- **CD&I: Requirements process steward**
  - Develop and Validate operational capability

- **MCSC: Acquisition process steward**
  - Execute the creation, delivery, support and performance of each Materiel Solution for the entire lifecycle of the program

- **MCLC: Sustainment process steward**
  - Execute & Manage Distribution, Supply Chain Management, Maintenance & Fielding Support, Continuous Sustainment Assessments & Lifecycle Planning

- **OPFORs: Operational process owner**
  - Account for and maintain equipment
  - Sustain readiness
  - Assist in requirement definition

- **M&RA: Manpower process steward**

- **TECOM: Training process steward**

- **P&R: Fiscal process steward**

- **MCO to institutionalize**
  - **Roles, responsibilities and relationships**
- **POA&M to define**
  - **Prioritized list of improvement actions**
  - **Accountability and schedule**

Way Ahead Discussion

Questions?

Backup Slides

We conducted a "Depot Maintenance" assessment of the *end-to-end* USMC

Aug 2007 to Jan 2008 --- **Feb 2008 to July 2008** --- **2008 - 2010**

| As is Process and Model Assessment | To be Process and Model Design | Piloting of New Processes and Conduct Model Assessment | Expanded Pilots and ELMP Implementation |

We are Here
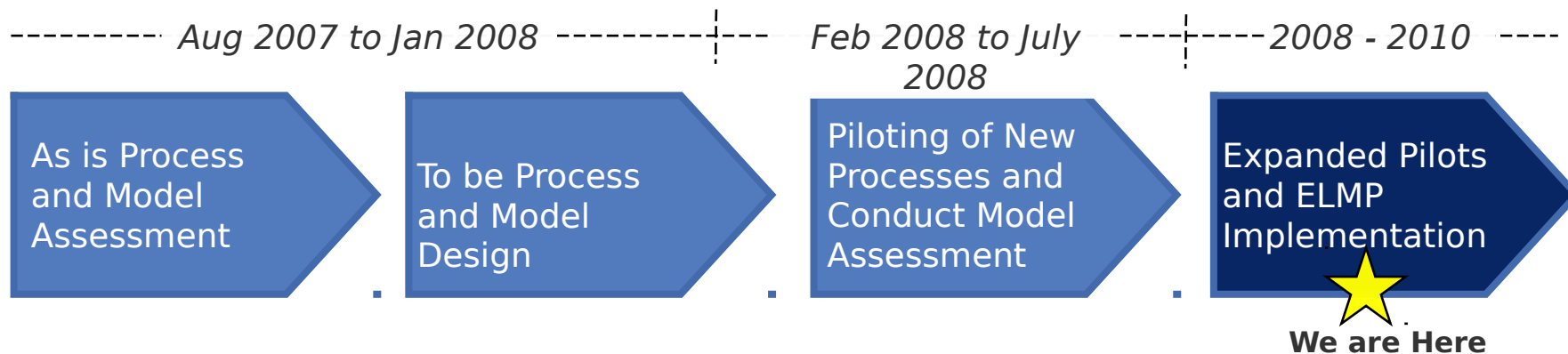
MCSC / PEO LS
- SMC
- LCC
- MMC
- MCA
- MCB
- P&R

CD&I

OSD
- DUSD (LM&R)
  - ADUSD - Maint

MCSC / PEO LS
- PEO LAND
- PGD / PM
  - GTES
  - M1A1
  - LAV

HQMC
- LPC
- LPV
- LCE
- LPO
- LSR

MARFORs
- I MEF
- II MEF
- III MEF
- MARFORRES
- MARFORPAC
- MARFORSOC

Other
- TECOM
- EEAP

Commercial
- GE – Water
- UPS
- WW Williams

Other Organic
- TACOM
- Army G-4
- Anniston
- Warner Robins
- Naval Aviation

DLMP ————————————————→ **ELMP**

ELMP = Enterprise Lifecycle Maintenance Planning

Assessment Findings	Actions Being Taken
Minimal collaboration between stakeholders	"To-be" process drives collaboration where necessary
DLMP Conference drove maintenance requirements	Maintenance requirements are a function of true unconstrained demand
DERO Model as a suboptimal planning tool	Robust Price & Performance Model optimizes maintenance planning
Lack of effective metrics to measure performance of depot maintenance planning processes	Implementation of Performance Measurement Framework drives operational improvements

We designed and piloted a process focused on a more collaborative approach to planning

ELMP

Requirements Planning Process | **DLMP Process**

USMC War fighting Requirements (HQMC)

Maintenance Requirements (MARFOR)

Readiness (HQMC)

Status & Condition (MARFOR)

Condition and Location
- By Serial Number
- Location / Environment
- Miles / Hours / Age / Rounds

External DoD Stakeholders, including DLA, USTC, and Industry

AAO (CD&I)

TLCM Requirements (?)

Depot TLCM Strategy
- Rotation
- SLEP
- PIP, etc.

Stratification (LOGCOM)

DLMP Demand Plan (LOGCOM)

Requirements
- On hand
- On order
- In repair

Depot Requirements (LOGCOM)

Budget (HQ P&R)

PPM (LOGCOM)

Budget (LOGCOM P&R)

Maintenance Execution

Depot Maintenance Capability – Pre-fielding

Constrained Funding (FYDP)

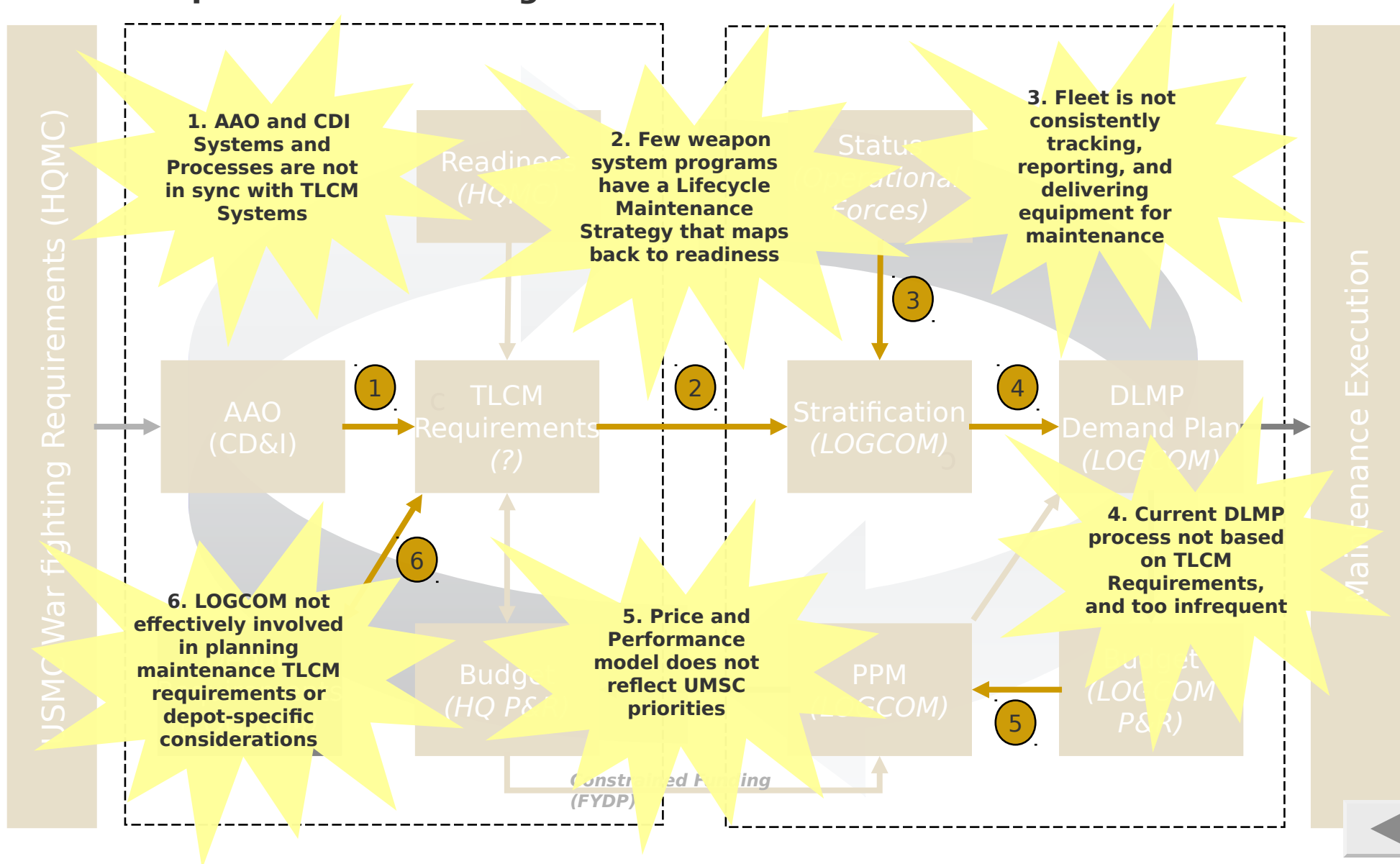|			
HQMC	MARCORSYSCOM	MARCORLOGCOM	MARFOR

We have learned that the most critical issues exist at the *handoff points* between Commands

Requirements Planning Process

DLMP Process

USMC War fighting Requirements (HQMC)

AAO (CD&I)

TLCM Requirements (?)

Readiness (HQMC)

Stratification (LOGCOM)

Status (Operational Forces)

DLMP Demand Plan (LOGCOM)

PPM (LOGCOM)

Budget (LOGCOM P&R)

Budget (HQ P&R)

Constrained Funding (FYDP)

Maintenance Execution

1 **2** **3** **4** **5** **6**

1. AAO and CDI Systems and Processes are not in sync with TLCM Systems

2. Few weapon system programs have a Lifecycle Maintenance Strategy that maps back to readiness

3. Fleet is not consistently tracking, reporting, and delivering equipment for maintenance

4. Current DLMP process not based on TLCM Requirements, and too infrequent

5. Price and Performance model does not reflect UMSC priorities

6. LOGCOM not effectively involved in planning maintenance TLCM requirements or depot-specific considerations

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Major actions are required of USMC Stakeholders

MARCORLOGCOM

- Clearly delineate critical information requirements in support of the DLMP process
- Consistently and repeatedly execute ELMP process – with collaboration with the MARFORs and SYSCOM to refine the Maintenance Plan
- Refine and gain USMC-wide acceptance of planning business rules and parameters for PPM
- Align ELMP planning with Depot Execution

MARCORSYSCOM

- Develop robust strategy for managing requirements over the weapon system's lifecycle to include evacuation criteria, rotation schedules, PIPs, and SLEPs – must be synchronized to the budget
- Consistently and repeatedly update / refine the lifecycle strategy with a single process that drives unconstrained requirements with standard inputs and outputs for all programs

HQMC / CD&I

- Publish clear Policy and Guidance to support creation and documentation of TLCM processes and specific activities, not just roles and responsibilities.
- Synchronize FYDP budget development and requests with projected Lifecycle Demand requirements – unconstrained demand plan should drive budget submission and be "locked" in defined time windows

MARFORs

- Accurately track condition and location of weapon system assets by serial number – and *measure* the accuracy of this process
- Collaborate proactively in the ELMP process to develop a maintenance plan – and understand out-year funding constraints and impacts
- Comply with the agreed-upon returns plan – and there must be a metric that looks at compliance to the returns plan – Justify changes to returns plan

Attributes	Proposed LOGCOM Metrics	Pilot Objectives					
		Actionable	SCOR Based	Customer Focused		Weapons System Oriented	Initiative Aligned
				Internal	External		
Reliability	On-Time Delivery to Promise Date	✓	✓	✓	✓	✓	✓
Responsiveness	Returns Cycle Time	✓	✓	✓	✓	✓	✓
	Repair Cycle Time	✓	✓	✓	✓	✓	✓
	Delivery Cycle Time	✓	✓	✓	✓	✓	✓
Flexibility	Production Upside Flexibility	✓	✓	✓	✓	✓	
Cost Efficiency	Total Supply Chain Management Costs (TSCMC)	✓	✓	✓	✓	✓	✓
Predictability	Maintenance Plan Accuracy	✓	✓	✓	✓	✓	✓
	Returns Plan Compliance	✓		✓		✓	✓
Quality	Effectiveness of Depot Repair	✓		✓	✓	✓	✓

- Definitions will be outcome oriented and aligned with Best Practices

- Level 1 metrics are supported by various process and diagnostic Level 2 and 3 metrics

- All metrics will enable overall Weapons System "Cost-Optimal Readiness"